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BJ Arts, WT0N, Amsat News Service editor
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SB SAT @ AMSAT $ANS-355.01
AMSAT-UK 13TH COLLOQUIUM

HR AMSAT NEWS SERVICE BULLETIN 355.01 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 21, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-355.01

The 13th AMSAT-UK Colloquium will be held at Surrey University, Guildford, Surrey, U.K., from Friday 31st July to Sunday 2nd August 1998. This year's event will include technical and operational matters as well as an IARU forum.

Amsat-UK invite authors to submit papers, about amateur radio space and associated activities, for this event and for the "Proceedings" document which will be published at the same time. We normally prefer authors to present the papers themselves rather than having someone else read them in the authors' absence, but we also welcome "unpresented" papers for the document.

Offers of Papers should be submitted as soon as possible; the final date for full documents is mid-June 1998 in order that the "Proceedings" document be available to participants. A second (and final) call for papers will issue about March 1998; probably at the same time as Colloquium booking information becomes available.

Submissions should be sent *ONLY* to G3RWL, via the following routes:

Internet e-mail: g3rwl@amsat.org
Packet Radio: G3RWL @ GB7HSN.#32.GBR.EU
Satellite: AO16/19/22/23/25

Terrestrial mail: R W L Limebear G3RWL
60 Willow Road
Enfield EN1 3NQ
United Kingdom.
(I have no fax)

AMSAT-UK also invite anyone with requests for Program Topics to submit them as soon as possible to G3RWL. Invitations for papers on specific subjects will be included in the future call.

[ANS thanks Richard Limebear, G3RWL, Colloquium Program organizer for this report.]

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SB SAT @ AMSAT $ANS-355.02
 SAREX QSL's for STS-83 & 94

HR AMSAT NEWS SERVICE BULLETIN 355.02 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 21, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-355.02

Dee Interdonato, NB2F, tells ANS the SAREX
QSL's for STS-83 & STS-94 were sent out on December
15th, 1997. The Bergen Amateur Radio Association of Northern NJ conducted
the QSL adventure for this latest SAREX Shuttle Mission. Thanks to the
efforts of John Chooljian, K2KRF, John Tworsky, KC2EV, Mike Surmick, K2QW
and Dee Interdonato, NB2F, the cards were processed and distributed as
quickly as accuracy permitted. Dee hopes all that were waiting will be
getting a well deserved Holiday present from the SAREX group.

[ANS thanks Dee Interdonato, NB2F, for this news.]

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SB SAT @ AMSAT $ANS-355.03
AMSAT '98 PLANS MOVING AHEAD

HR AMSAT NEWS SERVICE BULLETIN 355.043 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 21, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-355.03

Bill Ford, WB5SXK, reports that plans are moving forward for the
1998 Amsat Symposium to be held in Vicksburg, Mississippi from
October 9 through 11, 1998.

Bill says that the hotel location will be confirmed within a few weeks.
In the meantime, WB5SXK does have some basic information about
the Vicksburg area on the following web site:

http://pages.prodigy.com/DXHF93A

This information is also reachable via a link from the Amsat-NA home
page.

[ANS thanks Bill Ford, WB5SXK for this information]

SB SAT @ AMSAT $ANS-355.04
ASUSAT INFO

HR AMSAT NEWS SERVICE BULLETIN 355.04 FROM AMSAT HQ
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TO ALL RADIO AMATEURS BT
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The Amsat News Service was informed by
Assi Friedman, 4Z7ABA/KK7KX , of Arizona State University that
the FM repeater on the ASUSAT should offer a slight performance
improvement over AO-27. The downlink antenna on ASUSAT will be located
differently then AO-27 so it is expected to perform better too. The uplinks
should be just as good as AO-27 as they are using a similar configuration.
As to operating time, the repeater will use a PL decoder so it will not be
turned on for an entire window, it will only operate if someone tries to
access it. We have been redoing our power budget and it looks like we
will be able to provide more operating time, maybe even in eclipses - even
though there are no promises. The main factor that will determine the
duty cycle of the repeater is resource sharing with the GPS and Camera,
where the GPS is the second largest electron eater.

[ANS thanks Assi Friedman, 4Z7ABA/KK7KX , of Arizona State University
for this information.]

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SB SAT @ AMSAT $ANS-355.05

FREE LOGGING SOFTWARE

HR AMSAT NEWS SERVICE BULLETIN 355.05 FROM AMSAT HQ
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TO ALL RADIO AMATEURS BT
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Mark, N8VEA, is offering his free software program designed for logging VHF, UHF and satellite contacts. The program is called VHF-DX 4.0, and is compatible with Windows 95. The program covers all aspects of VHF, UHF and satellite logging. In addition, it tracks several awards such as VUCC, WAS and DXCC. For satellite use, it logs the name of the satellite as well as the up/down mode. Mark reports he has recently added both the MIR station and the space shuttle to the list of satellites. VHF/UHF contesting is also supported.

You can download the latest version at the N8VEA web site:
http://www.qsl.net/n8vea

[ANS thanks Mark Hoersten , N8VEA, for this information]

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SB SAT @ AMSAT $ANS-355.06
T49C QSL SERVER

HR AMSAT NEWS SERVICE BULLETIN 355.06 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 21, 1997
TO ALL RADIO AMATEURS BT
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Ray Soifer, W2RS, let the Amsat News Service know that he has checked with Bill, Kennamer, K5FUV, at the ARRL DXCC desk, who tells him that, under Rule 2, QSLs obtained from a server such as the one described in the ANS-348.05 bulletin are not acceptable for DXCC credit. Bill also said that he tried out the T49C server himself and found that the QSLs it produces are easy to modify, another good reason why they're no good for DXCC.

If one wants a QSL card that's good for DXCC, QSL in the usual way to the manager, SK0UX.

[ANS thanks Ray Soifer, W2RS, for this information.]

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SB SAT @ AMSAT $ANS-355.07
WEEKLY SATELLITE REPORT PT 1

HR AMSAT NEWS SERVICE BULLETIN 355.07 FROM AMSAT HQ
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TO ALL RADIO AMATEURS BT
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MIR
MIREX chief Dave Larsen, N6CO, reports that an announced crossband ''experiment'' has been abandoned for now because of problems with the antenna on MIR. The crossband test was to have begun December 1 and was to have involved a 70 cm uplink and a 2-meter downlink. US astronaut Dave Wolf, KC5VPF, has been on 145.985 MHz FM simplex from the Russian space station, but only sporadically.

A space walk at the end of December will check and--if necessary--repair the 2-meter/70-cm antenna that might have been

damaged during a space walk in November. The Kenwood TM-733 aboard
Mir has been connected to the spacecraft's SAFEX repeater antenna.

The Russian MAREX team and North American based MIREX team are aware of
the problem with the new TNC on Mir. They know exactly what the problem is,
They just need to wait for the crew to have time to make the adjustments.
Mirex has had detailed discussions with MAREX on which settings need to be
changed to restore full operations. The MIREX team was informed that the
crew was very busy and it may take a few days for them to make the changes.
When they do have time, they will make the adjustments. So, everyone is
asked to be patient in the meantime.
[ANS thanks the ARRL and MIREX team for this information]

SAFEX, MIR 70cm Repeater (Uplink 435.750 MHz FM, Downlink 437.950 MHz
FM, subaudible tone 141.3 Hz)
The SAFEX activity is very intermittent.
[ANS thanks the MIREX team for this information]

RS-12
(Uplink, 145.91-145.95 MHz CW/SSB, Downlink 29.41-29.45 MHz)
Operational, now in mode A.

RS-15
(Uplink 145.858-145.898 MHz CW/SSB, Downlink 29.354-29.394 MHz CW/SSB)
Operational.

RS-16
At this time only the beacons are on.
Transponder information on RS-16.
Uplink = 145.915 - 145.948 MHz
Downlink = 29.415 - 29.448 MHz
Beacons = 29.408 and 29.451 MHz
Pwr 29 MHz Down = 1.2 W /4 W

Beacon 1 = 435.504 MHz
Beacon 2 = 435.548 MHz
Pwr 435 MHz Beacons = 1.6 W

RS-17
Operational. 145.820 MHz
Sputnik is now flying 7 miles below Mir, in a shorter orbit. This will
place Sputnik, 34 minutes ahead of Mir.
New Sputnik-40 QSL Address QSL Information is as follows:
QSL Information for SWL (Short Wave Listener)

Sergey Samburov (RV3DR)
P.O. Box 73
Korolev-10 City
141070, Russia
 [ANS thanks the MIREX team for this information]

AO-10
(Uplink 435.030-435.18 MHz CW/LSB, Downlink 145.975-145.825 MHz
CW/USB)
Operational.

AO-27
(Uplink 145.85 MHz FM, Downlink 436.792 MHz FM)
Operational
[ANS thanks Michael Wyrick, N4USI, AO-27 Control-op, for this update]

FO-20
(Uplink 145.9-146.0 MHz CW/LSB, Downlink 435.8-435.9 MHz CW/USB)
Operational. FO-20 in mode JA continuously.

FO-20, like many Leo's is in a "sun synchronous" orbit. The precession in the RAAN of its orbit due to the earth's oblateness matches the earth's rotation around the sun so that FO-20 always has about 33 minutes of eclipse time each orbit and the rest in sunshine. A sun synchronous orbit is a retrograde LEO polar orbit with an inclination of about 98 degrees. At this inclination RAAN precession = 360 degrees in 365 days. The stability in temperature and solar energy is, needless to say, very helpful. The ratio of eclipse to sunlight can be adjusted by varying initial orbital elements. FO-29, for example, is virtually always in sunlight, UO-11 has about 22 minutes of eclipse, most seem to run about 33 minutes eclipse per orbit.

This also means that FO-20 (and other sun synchronous sats) appear at your location at about the same "sun time" every day. At my QTH FO-20 goes over about 1:30 PM and 3:30 PM every day. UO-11, AO-16, DO-17, WO-18, LO-19, UO-22, KO-25, AO-27, FO-29 etc are also in sun synchronous orbits. KO-23, RS-12/13, RS-15, though in highly inclined orbits, are not sun synchronous. [ANS thanks Stacey Mills, W4SM, and Kazu Sakamoto, JJ1WTK, for this report]

FO-29
Voice/CW Mode JA
(Uplink 145.9-146.0 MHz CW/LSB, Downlink 435.8-435.9 MHz CW/USB)
Digital Mode JD
(Uplink 145.85, 145.87, 145.910 MHz FM, Downlink 435.910 MHz FM 9600 baud BPSK)
Operational.
19 Dec. 08:49z Digi-talker
26 Dec. 07:42z JA
09 Jan. 07:14z JD 1200
16 Jan. 07:52z JD 9600
23 Jan. 08:30z JA
30 Jan. 07:24z JD 1200
[ANS thanks Kazu Sakamoto, JJ1WTK, for this report.]
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SB SAT @ AMSAT $ANS-355.08
WEEKLY SATELLITE REPORT PT 2

HR AMSAT NEWS SERVICE BULLETIN 355.08 FROM AMSAT HQ
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KO-23
(Uplink 145.85, 145.9 MHz FM, Downlink 435.175 MHz FM, 9600 Baud FSK)
KO-23 operating normally.
[ANS thanks Jim Weisenberger, AA7KC, for this report]

KO-25
(Uplink 145.980 MHz FM, Downlink 436.5 MHz FM, 9600 Baud FSK.)
KO-25 operating normally.
[ANS thanks Jim Weisenberger, AA7KC, for this report]

OSCAR-11
(Downlink 145.825 MHz. FM, 1200 Baud PSK. Beacon 2401.500 MHz)
Operating normally.
OSCAR-11 REPORT 15 December 1997
During the period 16 November to 15th December this satellite has continued to provide good signals on its 145.826 MHz. beacon, although some interference has occurred from DOVE and Sputnik-40, which also transmit near this frequency.

Two reports have been received about the mode-S beacon. Carl WA7PIB

reports 3-4 S points above the noise, compared with Dove's 8-9. A station in Sweden also reports the beacon at 8 dB above the noise. Many thanks for those reports.

The telemetry is nominal. Internal temperatures have continued to fall, and at the present time are 8.8C and 6.4C for battery and telemetry electronics respectively. This fall in temperature is due to increasing in solar eclipse times, which are expected to reach a maximum in early February.

Two WOD surveys have been transmitted during the period. Both are of Channels 10, 20, 30, 40 (+Y, -X, +X array currents, array voltage). The previous WOD dated 29 October continued until it was replaced by a survey dated 14 December. These show the effect of solar eclipses, on array currents, and voltage.

The new format AMSAT-UK bulletin, No. 114 is now being transmitted. This contains details of amateur satellite frequencies and modes of operation. It may be changed at monthly intervals.

The operating schedule is unchanged.

ASCII status (210 seconds)
ASCII bulletin (60 seconds)
BINARY SEU (30 seconds)
ASCII TLM (90 seconds)
ASCII WOD (120 seconds)
ASCII bulletin (60 seconds)
BINARY ENG (30 seconds)

There are also additional status blocks after each bulletin is transmitted, and between ASCII TLM and WOD.

The mode-S beacon is ON, transmitting an unmodulated carrier, but telemetry indicates that it has partially failed, and delivering half power. This beacon is a useful test source for those testing mode-S converters, prior to the launch of P3-D. It is considerably weaker than DOVE, which should be used for initial testing. Any reports of reception on 2401 MHz. would be most welcome. Please e-mail g3cwv@amsat.org.

The 435.025 MHz. beacon is normally OFF. However it can sometimes be heard when the satellite is being commanded by ground control, ie. within range of Guildford, UK. When the 435 beacon is transmitting, the 145 beacon is normally OFF. The data transmitted is mainly binary.

OSCAR-11 users are welcome to visit my web site. It contains some software for capturing data, and decoding ASCII telemetry and WOD. There is an archive of raw data (mainly WOD) for analysis, which is continually being expanded, as new data is captured. The URL is -

http://www.users.zetnet.co.uk/clivew/

[ANS thanks Clive Wallis, G3CWV, for this information]

AMSAT-OSCAR-16 (PACSAT)
(Uplink 145.9, 145.92, 145.94, 145.86 MHz FM, 1200 bps Manchester FSK
Downlink 437.0513 MHz SSB, 1200 bps RC-BPSK 1200 Baud PSK.
Beacon 2401.1428 MHz.)
Operating normally.
uptime is 1189/07:21:28. Time is Sat Dec 20 12:50:16 1997
+X (RX) Temp -9.078 D
RX Temp -0.002 D

Bat 1 Temp 6.049 D
Bat 2 Temp 4.839 D Baseplt Temp 7.260 D
RC PSK BP Temp 0.603 D RC PSK HPA Tmp 1.814 D
+Y Array Temp 1.814 D PSK TX HPA Tmp 0.603 D
+Z Array Temp -9.078 D
RC PSK TX Out 0.633 W

Total Array C= 0.467 Bat Ch Cur=-0.040 Ifb= 0.006 I+10V= 0.391
TX:010C BCR:7A PWRC:59F BT: A WC:25 EDAC:D3

Information about telemetry values and WOD files can be found at
http://www.arrakis.es/~ea1bcu/wod.htm
[ANS thanks Miguel A. Menendez, EA1BCU, for this report]

DO-17(DOVE)
(Downlink 145.825 MHz FM, 1200 Baud AFSK. Beacon 2401.220 MHz)
The DOVE S band beacon is on. The frequency is 2401.220 MHz. The 2 meter transmitter is also on, 145.825 MHz. Telemetry is being sent about every 30 seconds
A scanned image of the Dove's QSL at 425DXNews Web Site:
http://www-dx.deis.unibo.it/htdx/
[ANS thanks Jim White, WD0E, for this update]

WEBERSAT (WO-18)
(Downlink 437.104 MHz SSB, 1200 Baud PSK AX.25)
Bob Argyle, KB7KCL reports that WEBERSAT-OSCAR-18 is gathering and sending Whole Orbit Data. The PHOTO task is being uploaded and the command team hopes to have pictures and spectra by about the 12th of December. WO-18's return to service is suspected to be seasonal in nature. Bob sends thanks to all those who have sent telemetry received from WO-18.
[ANS thanks Bob Argyle, KB7KCL, and SpaceNews for this update.]

LUSAT-OSCAR-19
(Uplink 1200 bps Manchester FSK Uplinks: 145.84, 145.86, 145.88, 145.90 MHz FM, Downlink 437.125 MHz SSB, 1200 bps RC-BPSK.)
Operating normally.
uptime is 913/22:22:29. Time is Sat Dec 20 12:27:39 1997
+X (RX) Temp -3.796 D
RX Temp -0.430 D
Bat 1 Temp 4.057 D
Bat 2 Temp 3.496 D Baseplt Temp 2.935 D
RC PSK BP Temp -1.552 D RC PSK HPA Tmp -1.552 D
+Y Array Temp 0.692 D PSK TX HPA Tmp -3.235 D
+Z Array Temp -6.600 D
RC PSK TX Out 0.968 W
Total Array C= 0.320 Bat Ch Cur= 0.032 Ifb= 0.002 I+10V= 0.231
TX:016 BCR:33 PWRC:134AA BT:55 WC: 0

FTL0 Activity Log for Fri Dec 19 00:12:08 1997
23:00:08 FREE DISK 5181120 bytes \ 50 dirs

General information and telemetry samples can be found at:
http://www.arrakis.es/~ea1bcu/lo19.htm
[ANS thanks Miguel A. Menendez, EA1BCU, for this report]

UO-22
(Uplink: 145.900 or 145.975 MHz FM. Downlink 435.120 MHz FM 9600 Baud FSK)
UO-22 is operating normally.
Chris Jackson, G7UPN/ZL2TPO, has reloaded the Store and Forward communications task on the UO-22 On-Board Computer. This task includes incremental checksums which should make uploading slightly faster.
[ANS thanks Chris Jackson, G7UPN/ZL2TPO, Ground station and

Operations Manager of UO-22, for this report]

IO-26 (ITAMSAT)
Uplink 145.875, 145.900, 145.925, 145.950 MHz FM, Downlink 435.822 MHz
SSB, 1200 Baud PSK)
No report at this time.

[Please send your Satellite or News reports to ANS Editor BJ Arts,
WT0N, via e-mail, at bjarts@the-bridge.net or to wt0n@amsat.org]

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